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SHIP FINANCE FOR DEVELOPING COUNTRIES

Report by the UNCTAD secretariat

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INTRODUCTION

(i) The Committee on Shipping by its resolution 65 (XIV), paragraph 4, requested the UNCTAD secretariat to prepare a study on ship financing for developing countries. The relevant paragraph of the resolution reads as follow:

"4. Requests the UNCTAD secretariat to study the prevailing ship financing arrangements and assess their adequacy in meeting the requirements of developing countries and report the results to the Committee on Shipping at its fifteenth session;"

(ii) The present report reviews the situation for the period 1985-1991 and provides an update of the observations and conclusions of the earlier reports prepared by the secretariat.¹ The issues covered by the secretariat's prior reports on ship financing generally remain valid. Repetition of those issues is avoided in the present report except for reasons of clarity or up-dating.

(iii) In recent years the capital cost of ships has increased substantially. At the same time the capital available for financing investment needs has also declined. The erosion of capital base of shipping enterprises during the depressed markets has given rise to additional ship financing problems. Equally, certain ship financing institutions have innovated some new concepts in capital financing. The present report attempts to demonstrate, by detailed comparison and direct evidence, the effect of varying terms and conditions of ship financing on the feasibility of acquisition of ships and on the financial viability of a ship throughout its operating life.

(iv) The report consists of four chapters. Chapter I covers general observations on the present shipping markets and the fleet development of developing countries and makes a quantitative assessment of tonnage replacement and addition up to year 1995. Chapter II focuses on the types and sources of finance for acquisition of ships. Chapter III makes an assessment of ability to repay loans under selected financing terms at current freight rates. Finally, chapter IV presents conclusions and recommendations.

(v) The information used for this report was obtained from the following sources:

(a) responses to the note sent by the UNCTAD secretariat to the States members of UNCTAD (dated 28 February 1992);

(b) responses to a communication sent by the UNCTAD secretariat to selected commercial banks and ship mortgage banks;

(c) responses to a communication sent by the UNCTAD secretariat to international and regional development banks and other development finance institutions;

(d) responses to a communication sent by UNCTAD secretariat to selected shipping companies of developing countries;

(e) additional information obtained from published sources.

The responses have been integrated in the appropriate sections of this study. While a larger number of responses would have provided a better basis for analysis, the available information does provide a useful indication of the main features of ship financing in developing countries.

(vi) The UNCTAD secretariat wishes to acknowledge with gratitude the cooperation of Governments and the various organizations which supplied information in response to the note or the communications.

Chapter I

DEMAND FOR NEWBUILDING IN DEVELOPING COUNTRIES

General observations

1. After a prolonged depression the present shipping industry's outlook is one of optimism. The 1980s were dominated with low freight rates and eroding ship values. Indicators which point to improved conditions in the years ahead are affirmed by the increase in values of second-hand ships and buoyant markets in certain sectors of the shipping industry. Perhaps the most important indicator is the diminishing gap between supply and demand as the market approaches equilibrium. The tonnage balance had improved from a oversupply of 27.6 per cent of the active merchant fleet in 1981 to 10.7 per cent in 1990. Tables 1 and 2 give detailed information on the oversupply situation. A disturbing feature for all the participants in the maritime transport industry is that in certain sectors the fleet is ageing and hence the urgency for replacement of tonnage.

Table 1

Tonnage oversupply in the world merchant fleet, 1981-1990
(Million dwt and percentages)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
	(Million dwt)									
World merchant fleet (as at mid-year)	688.8	693.5	686.0	674.5	664.8	639.1	632.3	627.9	638.0	658.4
Surplus tonnage <u>a/</u>	149.1	184.1	195.8	171.2	161.5	108.0	101.1	83.4	62.3	63.7
Active fleet <u>b/</u>	539.7	509.4	490.2	503.3	503.3	531.0	531.2	544.5	575.7	594.7
	(Percentages)									
Surplus tonnage as a percentage of the world merchant fleet	21.6	26.5	28.5	25.4	23.4	16.9	16.0	13.3	9.8	9.7
Surplus tonnage as a percentage of the active world merchant fleet	27.6	36.1	39.9	34.0	32.2	20.3	19.0	15.3	10.8	10.7

Source: UNCTAD, *Review of Maritime Transport*, 1990, TD/B/C.4/340.

2. Analysing the decision-making process specifically in relation to ship investment, two factors emerge as triggers. It has been observed that new investments in ships are often triggered by rising freight rates and positive expectations of their future development. Historically, there had been a close relationship between freight rates and price of newbuilding and second-hand ships. Graphs 1 and 2 display the past trends. Details of prices for different types of ship are listed in annex I.

Table 2

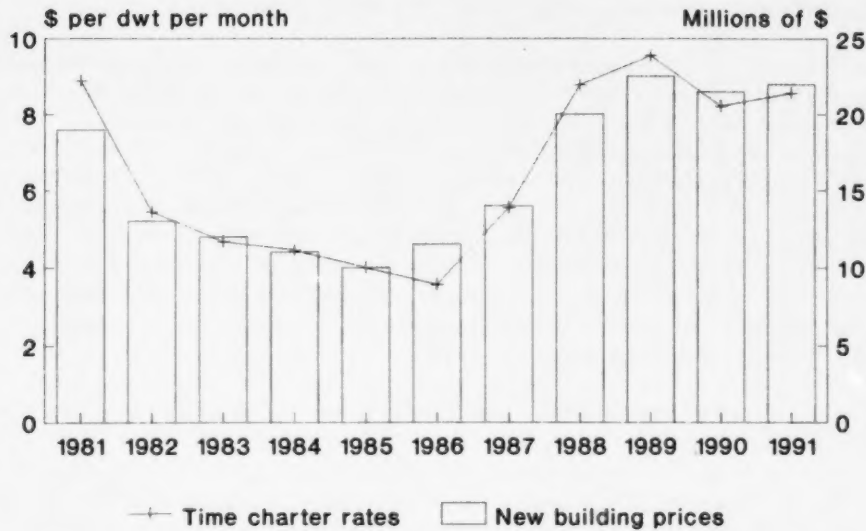
Analysis of tonnage oversupply by vessel type, 1981-1990
(Average year figures in million dwt)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Supply of world tanker fleet	341.3	335.0	319.4	296.7	273.0	261.7	255.1	250.6	253.9	266.2
Total tanker surplus fleet	107.7	130.7	134.0	111.7	100.9	68.8	65.8	54.7	41.0	41.0
Share of surplus fleet in the world tanker fleet (per cent)	31.5	39.0	41.9	37.6	36.9	26.3	25.8	21.8	16.1	15.4
Supply of world dry bulk fleet	184.0	197.0	202.9	215.0	222.7	215.4	213.8	220.6	225.4	228.7
Dry bulk fleet surplus	36.4	46.4	52.0	50.3	50.1	30.8	28.0	23.4	17.0	19.3
Share of surplus in the world dry bulk fleet (per cent)	19.8	23.5	25.6	23.4	22.5	14.3	13.1	10.6	7.5	8.4
Supply of world general cargo fleet	108.4	85.4	82.1	79.8	74.9	69.7	65.6	64.7	63.4	63.1
General cargo fleet surplus	4.4	6.1	8.3	7.6	5.8	4.3	3.6	2.9	2.2	1.8
Share of surplus in the world general cargo fleet (per cent)	4.0	7.1	10.1	9.5	7.7	6.2	5.5	4.5	3.5	2.8
Supply of world unitized fleet	21.1	22.9	25.2	27.3	29.9	31.2	32.9	34.4	35.8	37.5
Surplus of unitized fleet	0.6	0.9	1.5	1.6	1.7	1.5	1.7	0.8	0.8	0.5
Share of surplus in the world unitized fleet (per cent)	2.8	3.9	5.9	5.9	5.7	4.8	5.2	2.3	2.2	1.3

Source: UNCTAD, *Review of Maritime Transport, 1990*, TD/B/C.4/340.

Graph 1

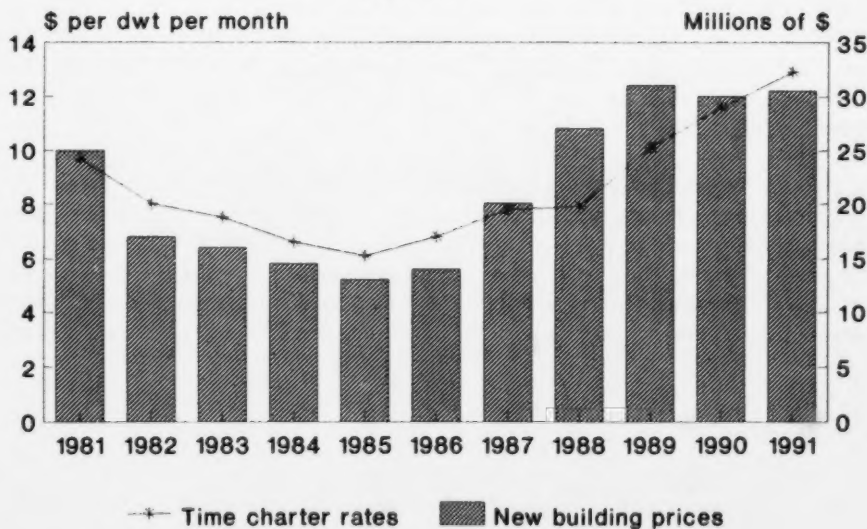
Relation between time charter rates and new building prices
for a 27,000 dwt bulk carrier
 1981 - 1991



Source: Fearnleys (Oslo) *Review 1991* (for newbuilding prices); *Lloyd's Shipping Economist* (London), various issues (for time charter rates).

Graph 2

Relation between time charter rates and new building price
for a 30,000 dwt tanker
 1981 - 1991



Source: Fearnleys (Oslo), *Review 1991* (for newbuilding prices); *Lloyd's Shipping Economist* (London), various issues (for time charter rates).

3. A prudent strategy for purchase of ships would be to buy ships when the prices are low. However, at such a time the freight rates would most probably also be low, thus reducing the confidence of the investors in the venture. Thus shipping enterprises find it difficult to raise capital. On the other hand, if capital were easily raised in a high freight period to purchase expensive ships, such ships, because of their high capital costs, may not be economically viable in the long run or if there is a downturn in the freight rates. Ideally, it would be best to raise capital in high market situation and exploit opportunities of low market to purchase ships.

4. For a capital-intensive business like shipping, terms and conditions of financing arrangements are of key importance, as they would dictate the success or failure of the enterprise. The majority of developing countries rely entirely on the import of ships. The use of scarce foreign exchange to service capital loans is an added difficulty under the present balance of payments situation of most developing countries. Keeping in view the structural adjustments which are taking place in the economies of developing countries and the process of liberalization of the shipping sector, through either increased participation of the private sector or privatization/commercialization of State-owned shipping enterprises, the need for injection of equity capital is evident. To raise equity capital in the capital markets, even the private sector shipping enterprises are at times constrained by the issue of the solvency of the State in which the enterprise is registered. At times ships could not fly the flag of the state and had to be registered under open registry flag in order to have access to funds for acquisition. Furthermore, unless a satisfactory level of profit is forthcoming it is very difficult to attract capital.

5. The average age for all ships was 14.06 years as of end-June 1990 in contrast to 12.98 years a year earlier. While there had been awareness of the ageing fleet, concerns were equally voiced on the possibility of shortage of capital for investments. An analysis carried out by a shipping economist of a leading commercial bank estimated that about 355 million dwt of newbuilding would be required between 1989 and 2000.² Of the 355 million dwt, replacement demand was put at 312 million dwt and the remaining of 43 million dwt was attributed to expansion demand. For this tonnage the financing requirement was estimated to be \$US 215.7 billion. This works out to an average requirement of 30 million dwt of newbuilding per annum. With the reduction of shipbuilding capacities globally, the new building deliveries in 1990 was 22.8 million dwt and provisional figures for 1991 was 23.4 million dwt. For a developing country, a World Bank report estimates a investment requirement of \$US 7.95 billion to the year 2000.³

6. Fleets of developing countries over a five years period had increased from 113.4 million dwt in 1985 to 139.7 million dwt in 1990. When compared to the world fleet, their share increased from 17.1 per cent in 1985 to 21.2 per cent in 1990. Table 3 shows the distribution of tonnage owned by developing countries by regions in terms of dwt.

7. Analysing developing countries fleet by ship type, as of end June 1990, the distribution were bulk carriers 43 per cent, followed by oil tankers 28.7 per cent and general cargo accounting for 19.2 per cent. The containership fleet constituted 2.9 per cent and other categories of ships 6.1 per cent. A detailed breakdown of the developing countries fleet between 1985 and 1990 is shown in table 4.

8. The age profile of the developing countries fleet was slightly less than average for the world fleet, in all categories of ship types except in case of general cargo ships. It can be observed from table 5 that the developing country fleet had been ageing over the past few years. The options available for reducing the age profile of the fleet are, to purchase relatively younger ships through the second-hand market, to order new ships, or to scrap the older tonnage. Large scale fleet renewal through acquisition of second-hand tonnage may not be feasible, as 69 per cent of the fleet owned by other countries than those of the developing countries are of 10 years and over.

Table 3

Tonnage owned by developing countries by region
(in millions of dwt)

	1985	1986	1987	1988	1989	1990
World Total	664.8	639.1	632.3	627.9	638.0	658.4
Developing countries	113.4	127.0	132.3	131.2	135.0	139.7
<u>of which in:</u>						
- Africa	8.0	7.5	7.3	7.7	7.3	7.3
- America	23.3	25.9	24.7	24.6	25.4	25.5
- Asia	78.6	85.1	91.3	87.2	89.0	89.5
- Europe	3.0	7.9	7.8	10.0	11.5	13.8
- Oceania	0.4	0.5	1.2	1.7	1.8	3.6

Source: UNCTAD, *Review of Maritime Transport*, various issues.

Table 4

Developing countries fleet by principal ship types
in '000 of dwt

Ship type	Year					
	1985	1986	1987	1988	1989	1990
Tankers	33 683	36 354	38 748	37 158	38 524	40 136
Bulk carriers	45 073	54 252	56 477	56 476	57 227	59 990
General cargo	25 350	25 974	25 855	26 016	26 214	26 853
Containerships	2 416	2 799	2 777	3 150	3 765	4 145
Other types	6 830	7 595	8 506	8 368	9 196	8 564

Source: UNCTAD, *Review of Maritime Transport*, various issues.

Table 5

Average age of developing countries fleet by ship type

Ship type	Year					
	1985	1986	1987	1988	1989	1990
All ships	11.35	11.42	11.72	11.99	12.67	13.44
Tankers	10.63	11.75	12.24	12.85	14.05	15.13
Bulk carriers	10.18	10.15	10.25	10.14	10.72	11.13
General cargo	13.78	13.95	14.40	14.87	15.19	15.79

Source: UNCTAD, *Review of Maritime Transport*, various issues.

9. To have an estimate of the magnitude of finance required for newbuilding, the starting point would be the replacement of the old ships. Further, there would be a need for some additional tonnage to cater to the growth in trade and fleet expansion activities. These total volumes of tonnage, if multiplied by the current average price per tonne of construction cost, would give an estimate of the gross investment required. An attempt is made here to only provide indicative figures, while due consideration should be given to the developments in the shipbuilding industry in the future and policy directions taken by the developing countries with regard to their participation in shipping.

10. Table 6 provides details as of end-June 1990 of the developing countries fleet by principal ship types and age grouping in terms of dwt.

Table 6

Age profile of developing countries fleet by ship type
in terms of '000 of dwt as of end June 1990

Ship type	Total	Age in years			
		0 - 4	5 - 9	10 - 15	15 +
All ships	116 850	14 541	26 912	30 693	44 704
Tankers	34 796	3 304	5 112	9 607	16 774
Bulk carriers	46 759	8 673	15 685	9 931	12 470
General cargo	23 924	1 034	3 265	7 910	11 716
Containership	3 497	982	747	1 005	764
Other types	7 872	545	2 103	2 240	2 980

Source: UNCTAD, based on information supplied by Lloyd's Maritime Information Services Ltd.

11. As a base case, if the following assumptions were made:

- that progressively up to 1995, all ships currently over the age of 15 years would be replaced as they approach the end of their economic life. This would translate to 44.7 million dwt to be replaced;

- the additional tonnage requirement were based on the past growth rate, on average the growth of the developing countries fleet has been at 5.26 million dwt per year between 1985 and 1990. The average for the period 1970 to 1990 had been at a rate of 4 million dwt per annum;
- of the average growth of 5.26 million dwt per annum, about 70 per cent of the tonnage addition was acquired through newbuilding between 1985 and 1990, and similar proportion would account for newbuilding in the future;
- the fleet composition by ship type did not change significantly in the past and the future fleet composition would remain the same.

12. On the above assumptions, the growth to be expected between 1990-1995 would result in a tonnage addition of 26.3 million dwt for the period. Applying the ratio of 70 per cent for newbuilding to expected tonnage addition between 1990-1995 translates to a requirement of about 18.4 million dwt of newbuilding.

13. Hence, the total tonnage, replacement and addition tonnages until 1995, would be about 63 million dwt, at a total cost of \$US 58.3 billions. This translates to an average of 12.6 million dwt or \$US 11.66 billions per annum investment initiative to be undertaken by the developing countries.

14. Table 7 estimates the magnitude of finance required based on above assumption of fleet composition by ship types, based on average costs of construction per dwt by ship type at 1991 prices. While these cost are only indicative there are possibilities that the total requirement would follow an upward scale, as studies suggest that the ship prices are likely to go up for a variety of reasons which are beyond the scope of the present study to examine.

Table 7

Investment in ship acquisition by developing countries, 1990-1995

Ship type	Newbuilding required in millions of dwt	Price per dwt (1991 price) in \$US	Investment required in billions of \$US
Tankers	24.7	620	15.3
Bulk carriers	17.7	575	10.2
General cargo	15.2	1600	24.3
Containerships	1.3	1850	2.4
Others	4.1	1500	6.1
Total	63.0		58.3

15. Fleet replacement could be postponed by developing countries, on the assumption that certain initiatives were undertaken to extend the economic life of the ship. However, as countries other than developing would also be undertaking fleet renewal, a problem which may be faced at later period of time by developing countries, would be the shortage of shipbuilding capacities. Such a shortage could become a major constraint to new investments in the newbuilding sector. Reports suggest that the far eastern shipyards had full order books, and at current production capacity and level, have work until the end of 1994.

16. If no fleet expansion for developing countries were considered, just to maintain the current tonnage levels, replacement tonnage requirement theoretically amounts to 44.7 million dwt. At above price estimates, this would represent a financing requirement of about \$US 42.2 billion for the period 1990-1995.

Chapter II

TYPES AND SOURCES OF SHIP FINANCING

A. Terms and conditions of ship loan agreements

17. Loan agreements consist of several variables, which when summed up determine the degree of hardness or softness of the credit terms. These variables include the following:

- (1) Down payment, which is generally a percentage of the price of the ship for which the credit is available;
- (2) The rate of interest, the commitment fee and service charges;
- (3) The loan repayment period;
- (4) The grace period.

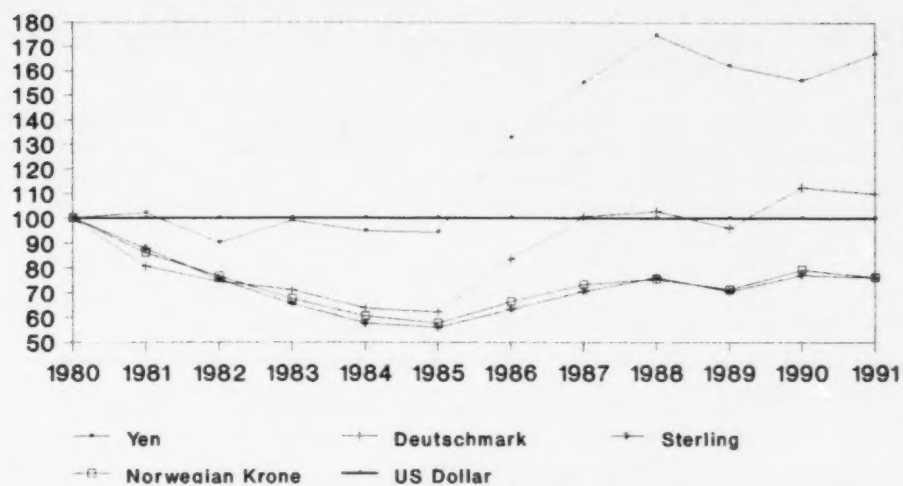
18. A decrease in the percentages for down payment and interest rates and increase in repayment and grace periods would result in softer terms. The effect of these on the projected cash flows is substantial and is demonstrated in the examples in chapter III of this report. Other important elements of loan agreements are the currency of repayment, and the guarantee which the borrower is asked to provide. Fluctuation in these elements, either individually or in combination could either, favourable or unfavourable, affect the outcome of the investment. As external factors influence the movement of these elements, there is very little or no control exercised by a shipping enterprise.

19. Graph 3 indicates the movement of major shipping currencies relative to the dollar. The relevance of these movements may have an effect on the repayment of loans, if they had been availed in currencies other than dollars, since freight earning are generally quoted in dollars. If a ship was purchased using Japanese Yen, this would result in serious repayment difficulties on account of appreciation of the yen against the dollar. As Japan has not offered dollar denominated contracts for the past few years, the potential risk involved in Yen denominated contracts with delivery dates two years away could be formidable. If a newbuilding were to be contracted in 1990, when the yen/dollar rate was Y 143.6/\$US, fully aware that the yen strengthening would occur between signing of contract and delivery, would face a 6 per cent appreciation of the ship price in dollar terms in a matter of a year. The yen/dollar rate average during 1991 was Y 134.6/\$US. Similarly, the Deutschmark, though depreciated against the dollar till 1985, but recovered its position in two years and is currently above the 1980 parity. Future movements are not easily predictable. Sophisticated currency hedging instruments have been developed in the financial markets and the shipping industry has made use of such options. In currency swapping arrangements additional cost and risks are borne by the shipowner. However, from a loan point of view, in an appreciating dollar situation, it would be advisable to shift to other currencies and while the dollar is declining to retain the loan in dollar denomination.

20. Graph 4 shows the movement of London Inter Bank Offered Rate (LIBOR) for six month deposit in dollars. Loans availed in floating interest rates would be charged a few points above the LIBOR and is dependent on the volume of transaction and the credit rating of the borrower. For shipping loans, this spread varies between 1.5 per cent and 2.5 per cent. In certain transactions it had been at a lower percentage. The use of a fixed or a floating interest rates would depend on the choice of source of finance.

Graph 3

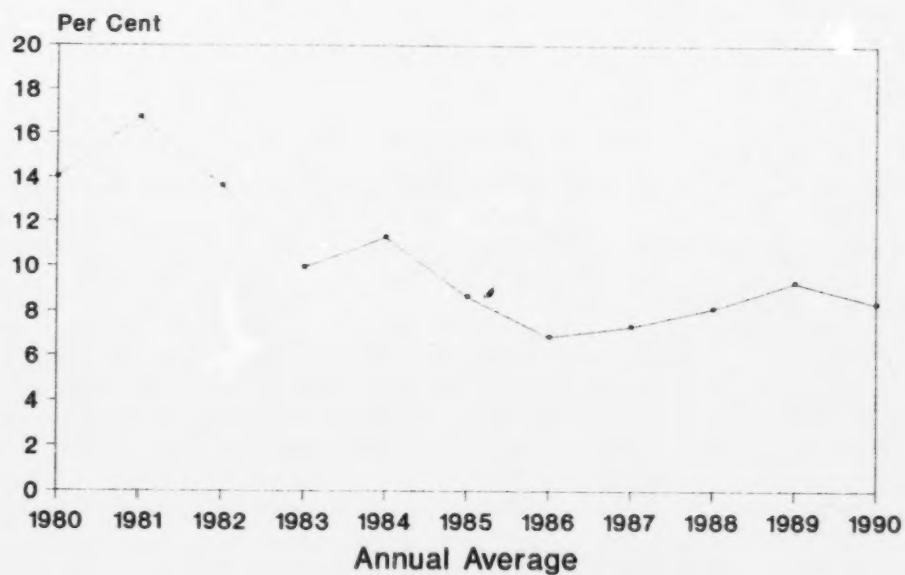
Movement of principal shipping currencies
against the dollar (index 1980 = 100)



Source: *International Financial Statistics Yearbook*, IMF, 1991.

Graph 4

Movements in London Inter Bank Offered Rates
Based on six months SUS deposit



Source: *International Financial Statistics Yearbook*, IMF, 1991.

21. The LIBOR rates had not had volatile fluctuations over the past five years in contrast to the period between 1980 and 1985. Between 1988 and 1990 the average rate was 8.35 per cent. It had been possible to swap between the fixed and floating interest rates to take advantage of the finance market situations but would be at additional cost to the shipowner. From a cash flow situation, fixed interest rates offer additional security towards forecasting repayment of loans, thus reducing interest exposure risks.

22. Table 8 gives a comparison of the different interest rates. It must be noted that only OECD credit is offered at a fixed interest rate and others are floating rates.

23. Securities which are to be furnished may be preferred mortgage, assignment of income to bank, assignment of insurance, bank guarantees, personal guarantees, pledges of other assets and other collateral. Bank guarantees to be furnished by the borrower, normally cost would be about 1 to 2 per cent of the value of the transaction and are based on the credit rating of the shipping enterprise.

Table 8
Interest rates comparison

Year	OECD	LIBOR	National interest rates of selected shipbuilding countries						
			United States	Germany	France	Norway	Sweden	United Kingdom	Japan
1980	8.0	14.03	13.36	9.06	11.85	11.16	12.17	15.62	10.93
1981	8.0	16.72	16.38	11.26	15.30	12.35	14.35	13.12	7.43
1982	8.0	13.60	12.26	8.67	14.87	13.91	13.29	11.36	6.94
1983	8.0	9.93	9.09	5.36	12.53	12.27	10.85	9.09	6.39
1984	8.0	11.29	10.23	5.55	11.74	12.67	11.77	7.62	6.10
1985	8.0	8.64	8.10	5.19	9.93	12.29	13.85	10.78	6.46
1986	8.0	6.85	6.81	4.57	7.74	14.15	10.15	10.68	4.79
1987	8.0	7.30	6.66	3.27	7.98	14.66	9.16	9.66	3.51
1988	8.0	8.13	7.61	4.01	7.52	13.29	10.08	10.31	3.62
1989	8.0	9.27	9.22	6.59	9.07	11.31	11.52	13.88	4.87
1990	8.0	8.35	8.10	7.92	9.85	11.45	13.45	14.68	7.24

Source: IMF, *International Financial Statistics Yearbook*, 1991.

B. Sources of ship financing

24. The potential sources of financing for the purchase of ships have not radically changed over the past five to seven years. They are equity investments, bank or export credits, loans from international institutions, bilateral aid loans from governments, and specialized ship mortgage banks. The debt liability of the shipping industry, had grown in contrast to other industries, partly due to the huge amounts required.

1. Equity investments

25. Equity investment could be from both internal and external resources. Internal resources would be in the form of retained profits from prior earnings or accumulated depreciation or other reserves. In the past, these forms of resources had played a dominant role in the capital structure in existing shipping enterprises. Under the depressed freight market conditions, most shipping enterprises were incurring losses. Consequently an increasingly large portion of the future financing requirements would have to be met from external sources.

26. External resources are in the form of issuing of shares on the capital market. Capital markets are highly regulated and in order for an enterprise to raise capital it must achieve the recognised standard of "credit-worthiness" and offer a competitive rate of return to investors. Given the poor track record of performance by many shipping enterprises, on account of volatile fluctuations in the freight rates, it had been difficult to generate sufficient confidence among the investors to subscribe to capital issues made by them. Capital markets in the majority of the developing countries were dominated by the manufacturing sector and service sectors like shipping had a marginal role. Moreover, the dominance of public sector in shipping enterprises of developing countries further reduced the potential use of the capital market as a source of funding. However, these enterprises must be expected to provide equity capital, from private or government sources, in some proportion towards the capital requirements.

2. Commercial banks

27. About 40 commercial or specialized ship mortgage banks were requested to provide information on any financing arrangements they had made to shipping enterprise in developing countries, including arrangement for loans, the terms used for the financing arrangements and conditions for eligibility.

28. Replies were received from 17 banks, of which 10 stated that they had not provided any ship financing to developing countries over the past five years. One bank declined to give information. One bank stated that it was involved in financing through a international financing institution for the purchase of a ferry. Another bank advised on two project proposals for developing countries but it did not participate in financing. Only four banks of the sample, one of which is from a developing country stated that they were involved in financing ships.

29. Banks A and B stated that they were actively involved, and had concluded arrangements which would not have been possible with other international banks, owing to above average country risk. However, they did not provide information on the size of loans arranged. Bank C had primarily concentrated on financing second-hand ships to the private sector rather than public shipping lines. Generally, it provides finance for 50-60 per cent of the asset value. The period of financing was short, typically two-three years and, in specific cases, for a maximum five years. However, the ship must be registered under a flag suitable to the bank. The average loan size was around SUS 10 million.

30. Bank D provided a maximum of 70 per cent of the purchase price provided the overall debt equity ratio of the enterprise as a whole is restricted to 2:1. The interest charge, if fixed, varied between 11-12 per cent, and if floating rates were used the spread was between 2.5-3.5 per cent above LIBOR. The repayment period was limited to a maximum of 75 per cent of the economic life of the ship. Typically this related to a period of 5 to 10 years, depending on the ship being purchased. They also provided for leasing charged at market rates - currently 10.5 per cent. The payments were structured to take into account the capital cost and a minimum return. At the end of the lease period the lessee could acquire the ship at a residual value, normally the acquisition cost being in the region of 2-5 per cent of the price of the ship.

31. As early as 1984, the international commercial banking system had gone through a crisis of confidence, which, though not specifically related to shipping, had an effect on lending attitudes. Although banks lending to the shipping industry represented a small part of the total, the increase in number of problems with the loans, resulted in banks taking much tougher actions over the defaulted loans.⁴ The need for banks to write off bad debts in shipping, must be considered as a part of the wider banking crisis. Banks faced with capital adequacy problems of their own and increased regulation related to lending had to adopt a rigorous attitude towards ship financing.⁵ This led to a period where the borrowers were divided into two distinct categories, first class and others. Those in the "others" category generally found it difficult to raise finance on attractive terms.

32. The bankruptcies of established shipping enterprises had taught some hard lessons to the financial institutions. According to the Vice-President of a major shipping bank, two lessons were learnt.⁶ First, the terms and conditions offered in the past had been too generous. Second, banks had been too loose in evaluation of the risks in shipping. During 1983, banks were willing to put up 80 per cent to 90 per cent of shipping ventures, with a repayment period of ten years. The banking industry standard has been revised over the years, and currently they offer 60 per cent to 70 per cent over a shorter duration of seven to eight years. The use of long-term charters as a collateral has not been accepted on account of increases in the premature termination of charter agreements.

33. The lack of an adequate international convention on maritime liens and mortgages had been a major problem for the financiers in protection of their investments. Most of the legislation in developing countries governing maritime liens and mortgages is confined to national jurisdiction. From a financier's point of view the inability to exercise control over the mortgaged assets beyond a national boundary, in case of default on the loan, had often been the cause for not supporting investment initiatives. Hence the insistence by financiers on registering the ship under the flag most suited to them. To alleviate these problems, a Joint UNCTAD/IMO Intergovernmental Group of Experts was entrusted with the task of elaborating a draft convention on maritime liens and mortgages. The objectives of the draft convention are: (a) to provide a generally acceptable legal framework governing the recognition and enforcement of maritime liens and mortgages and thus achieve international uniformity; (b) to strengthen the international position of the mortgagees and financiers of shipbuilding and ship purchase and thereby to improve the conditions for ship financing at the international level. A Conference of Plenipotentiaries will be held in the spring of 1993 to consider and adopt the draft convention on maritime liens and mortgages.

34. Generally, the commercial banks have played a significant role in the provision of finance for purchase of second-hand ships. Equally, much of the newbuilding financed through government-backed export credit schemes, specifically the shipbuilding credit, has been with cooperation of the commercial banking system.

3. Export credits

35. The use of export credit financing had been the main method for financing of newbuildings. Under the export credit system, an international agreement which governs the terms and conditions for shipbuilding is the OECD Understanding on Export Credits for Ships. The current Understanding is 80 per cent of the contract value at an interest rate of 8 per cent with repayment over eight and half years from delivery in equal semi-annual instalments. Participants in the OECD Understanding are the countries of the European Economic Community, Finland, Japan, New Zealand, Norway and Sweden. The Republic of Korea, while not a member of OECD, provides shipbuilding credits on the lines of OECD agreement.

4. International and regional development banks and financial institutions

36. Information was requested from eight institutions⁷ and replies were received from three institutions.

37. The Asian Development Bank (ADB) stated that it is not usually involved in direct ship financing but had indirectly financed ship purchase activities under the scope of a more broad based maritime transport development project or through sub-loans made available to Development Finance Companies (DFC). These sub-loans were made use of by enterprises both in the private and public sectors. The funds were used to acquire new and predominantly second-hand ships which totalled SUS 100 million. However, only a minor portion of this total amount has been lent since 1985.

38. The ADB considers that, apart from depression in shipping markets, the introduction of new guidelines by the bank for procurement of second-hand ships has contributed to the decline in lending through sub-loans. The guideline requirements include strict age limits, independent technical and valuation survey reports, classification of the ship with a member of the International Association of Classification Societies and compliance with major international conventions on safety, tonnage and loadline, etc. In addition, above a varying free limit amount, the borrower is expected to provide a detailed appraisal on managerial capacity, financial capacity, his experience in the industry and anticipated financial rate of return for the proposed project.

39. The Islamic Development Bank (IDB) indicated that since its inception in 1975 it had been involved in financing of ships for enterprises in its member countries, totalling about SUS 155.8 millions. Table 9 gives a list of loans sanctioned by the IDB since 1975 to date.

40. Two modes of financing were used to finance ships for its clients, either through the lease arrangement or through instalment sale. The distinction between the two is that in the former case the title of the ship vested with IDB till the last lease instalment is paid, subsequently the ship is transferred to the lessee as a gift. In case of instalment sale the ownership of the ship is transferred to the enterprise on delivery of the ship. IDB had financed the full cost of acquisition.

Table 9

Islamic Development Bank shipping loan approvals
1975 - 1992

Effective year	Country	Financing mode	Amount \$US millions	Remarks
1979	A	Lease	6.0	
1980	B	Lease	11.0	
1981	C	Lease	3.5	
1982	D	Lease	16.0	
1982	C	Lease	3.4	
1983	A	Lease	10.4	
1984	E	Lease	8.0	
1986	C	Instalment	7.0	
1987	A	Lease	5.5	
1987	A	Lease	5.5	
1988	B	Instalment	20.0	implementation
1989	F	Instalment	15.0	
1989	G	Instalment	10.0	
	G	Instalment	9.0	approved
	H	Instalment	13.0	approved
	I	Instalment	10.0	approved

Source: Islamic Development Bank.

41. Broad terms used by the IDB for ship financing were the following:

- the ship was expected to have an economic life of 3-5 years after the expiry of the lease/loan period;
- repayment period ranged between 7-10 years with a grace period of 3 years;
- interest charges varied between 8-9 per cent and a 15 per cent rebate was offered on interest due, if repayments were made on time;
- guarantees were required from the government or a first class commercial bank acceptable to IDB.

42. The primary eligibility criterion is that the request for financing should come from an enterprise of a member country and that the application is made through appropriate government channels, usually the Ministry of Finance.

43. The World Bank (IBRD and IDA) stated that its involvement in ship financing has been limited and expressed the view that commercial bank funding was usually more attractive to ship owners/ship operators. The Bank was not always convinced of fleet expansion/development in developing countries, keeping in view the availability of tonnage in international markets with competitive rates and quality services.

44. However, the Bank had several lending operations which indirectly provided finance for ship acquisition. These lending were either general development bank credits to Development Finance Companies (DFC) or industrial development projects. Details on these lending were published in the earlier report by the UNCTAD secretariat. ⁸

5. Mezzanine finance

45. This form of finance could be viewed as a bridging arrangement, except that this method would be more expensive when compared to the commercial loan. In terms of capital ranking it is after the senior debt but before

the ordinary equity. Many forms of financial instruments are used for it, such as secured and unsecured loan stock or preferred shares or subordinate notes or a second mortgage loan. In some cases, such an arrangement would have the option to convert into ordinary equity.

46. As mezzanine financing is less secure than the senior debt, the interest cost tends to be higher. There are indications of increasing use of such a method, as it is a means to bridge the difference between the owner's equity and the secured first mortgage loans. The borrower may thus have a reduced commitment of equity with scope for maximizing the potential return on equity. While many variations of the financial instruments may be used to raise the subordinate debt, the merits of each package would have to be examined on a case-by-case basis. One company had been reported to be active in provision of such financing arrangement.⁹ Such arrangements have been extensively used in purchase of second-hand ships and the operation of the ship was for a limited period to take advantage of short-term market up-turns in certain sectors, and speculative asset value.

47. For developing countries' shipping enterprises, this method may be able to reduce the country risk element, as far as the first mortgagee would be concerned, thus increasing their access to finance, but at a cost.

6. Joint ventures

48. The increasing relevance of joint ventures in shipping had been observed through the cooperative arrangements in the liner sector. Such cooperation was largely limited to the operators of the developed countries. The main reason for entering a joint venture is generally that neither party on its own has at its disposal all the elements necessary to realize the objectives of the venture. Thus the need to pool resources with other operators. In the context of ship financing the primary objective of a developing country shipping enterprise would be to gain access to much needed finance. On the other hand, the partner from the developed country may have other incentives. Given their potential, such ventures should not be limited to North-South cooperation but also South-South. The elements which supplement each of the partners could provide impressive economies of scale.

7. Leasing

49. Ship leasing contracts are negotiated by the lessor and the lessee, yet the existence of an international legal framework clearly defining the rights and obligations of the parties to such a transaction would encourage cross-border leasing. The UNIDROIT Convention on International Financial Leasing, 1988, covers leasing of equipments, including ships.

50. While leasing has become a popular method of financing ship acquisition, operational leasing had previously existed under the terminology of bareboat demise charter. Bareboat chartering, though a favourable method of ship acquisition with virtually no financial outlay, had not been extensively used by developing countries. "This mode of bareboat chartering ships first and subsequently owning them should catch the imagination of aspiring developing countries to expand their merchant fleet.... The expansion programmes, on the other hand, cannot be indefinitely postponed, for the reason that survival depends on prudently shedding their [developing countries] uneconomic tonnage and replacing them with modern, technologically advanced ships."¹⁰

51. A report by the UNCTAD secretariat - *Container Ship Leasing*, (TD/B/C.4/339) - examines the advantages and disadvantages of leasing, among other issues related to leasing. While leasing may be an attractive option for acquiring ships, specifically in cross-border leasing, the lessor may be obliged to register the ship in his home country to claim tax benefits or to conform to legislations pertaining to chartering out of ships. Thus in certain cases the bareboat chartered vessel may not fly the charterer's country flag.

52. In one of the responses a shipping company in a developing country stated it had arranged for a lease of a containership, but had to register the ship under an open-registry flag. Another response indicated that, while arrangements were being finalized for the acquisition of eight tankers under leasing, the ships would be registered under a open-registry flag. In the case of developing countries, suitable legislative changes need to be made to support bareboat chartering.

Chapter III

ABILITY TO REPAY

53. A study merely of the different financial terms available would not determine the adequacy of ship financing. The ability to repay those loans under current market conditions is equally important. To provide a general picture of the current and expected future situations certain hypothetical examples have been worked out. The essential focus is on timing of the purchase as the value of the ships is subject to variations.

54. Factors which affect the ability to repay are the market freight rate, size and structure of capital cost, and - most important - operating costs. The first two elements are dependent on the market forces and operating cost may be controlled to some extent by the shipowner. A number of costs make up the operating costs, such as manning, repair and maintenance, insurance, store and lubes, and administrative costs. In the analysis a 5 per cent escalation has been considered. However, a leading ship management company predicts an escalation of 9 per cent per annum between 1990 and 1995.¹¹ It also forecasts a shortage of qualified and experienced seafarers, which would result in increased manning costs. A report examining ship costs suggests that repair and maintenance cost will increase more than double by the year 2000. Further, insurance costs will escalate with increasing ship values and increasing liabilities arising particularly from oil pollution and other environmental risks (see table 10).

Table 10

Vessel running cost forecast for a handy-size bulk carrier

Cost components	1990	1995	Average per cent/year increase
	S/day	S/day	
Total crew cost <u>a/</u>	1 931	2 835	8
Stores & equipment	329	461	7
Lubes	178	238	6
R & M	548	769	7
Insurance	397	507	20
Administration	425	1 058	5
Total	3 808	5 868	9

Source: *Lloyd's Shipping Economist*, December 1991, p. 3.

a/ Including wages, travel and victualling.

55. An assessment is made by comparing the break-even time charter rates under different loan agreements. Break-even charter rates have been computed for the period of the loan and they cover both the capital cost and the operating costs. In the conduct of an analysis, a number of options are available. These have been kept to minimum to provide a base case. The detailed set of assumptions of data and the method used is shown in annex II.

A. Newbuilding case studies

56. Table 11 shows the break-even charter rates under two alternative loan agreement, if orders for newbuildings were placed in 1985 and commence trading in 1987, for a 27,000 dwt bulk carrier and a 80,000 dwt tanker. During this period the prices of both newbuildings and second-hand ships were the lowest. As can be observed from graphs 5 and 6, in the case of a bulk carrier, bearing in mind that the ships were ordered at the lowest price and assuming the loan had been under the OECD terms (except for 1989), in all other years the market rates would not have been able to cover the capital and operating costs. Had the loan been under the UNCTAD V resolution terms (see annex II), then the market rates would have covered its capital and operating costs. Considering that higher break-even rates are required in the later years, under current market rates the venture would not be able to create sufficient cash surpluses to support asset renewal.

Table 11

Comparison of break-even and actual market time charter rates
in \$US per day

Loan 1: 27,000 dwt, Bulk carrier, newbuilding 1985, trading 1987.

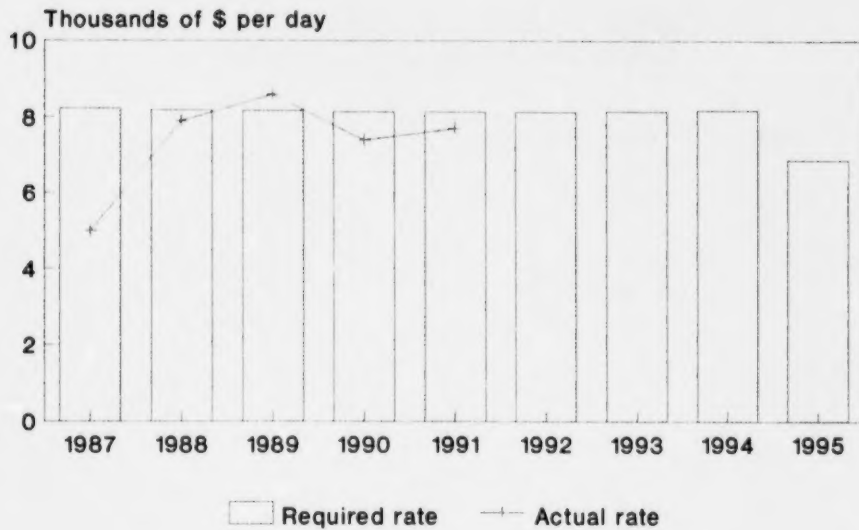
Year	Rates on OECD terms	Rates on UNCTAD V resolution terms	Actual market (1 Year) time charter rates average
1987	8 230	6 866	5 000
1988	8 194	6 957	7 900
1989	8 167	7 056	8 600
1990	8 150	7 166	7 400
1991	8 143	7 285	7 700
1992	8 147	7 415	
1993	8 162	7 557	
1994	8 188	7 710	
1995	6 868	7 875	
1996		8 054	
1997		8 364	
1998		8 573	
1999		8 798	
2000		9 038	

Loan 2: 80,000 dwt, Tanker, newbuilding 1985, trading 1987.

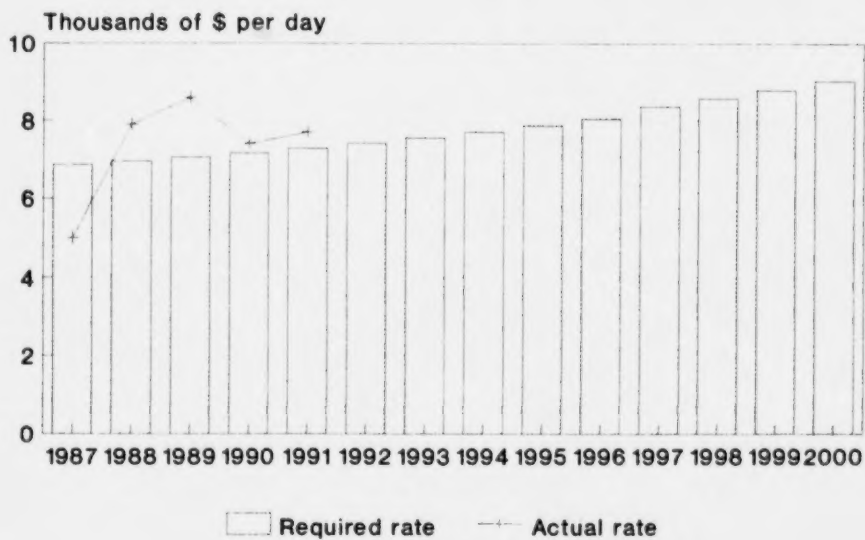
Year	Rates on OECD terms	Rates on UNCTAD V resolution terms	Actual market (1 Year) time charter rates average
1987	12 615	10 093	7 467
1988	12 418	10 129	10 400
1989	12 231	10 177	9 333
1990	12 056	10 235	10 667
1991	11 892	10 305	11 467
1992	11 740	10 387	
1993	11 601	10 482	
1994	11 476	10 591	
1995	8 849	10 713	
1996		10 851	
1997		11 161	
1998		11 333	
1999		11 522	
2000		11 729	

Graph 5

Required charter rate versus actual market rate
for a 27,000 dwt bulk carrier, built 1985. (OECD terms)

Graph 6

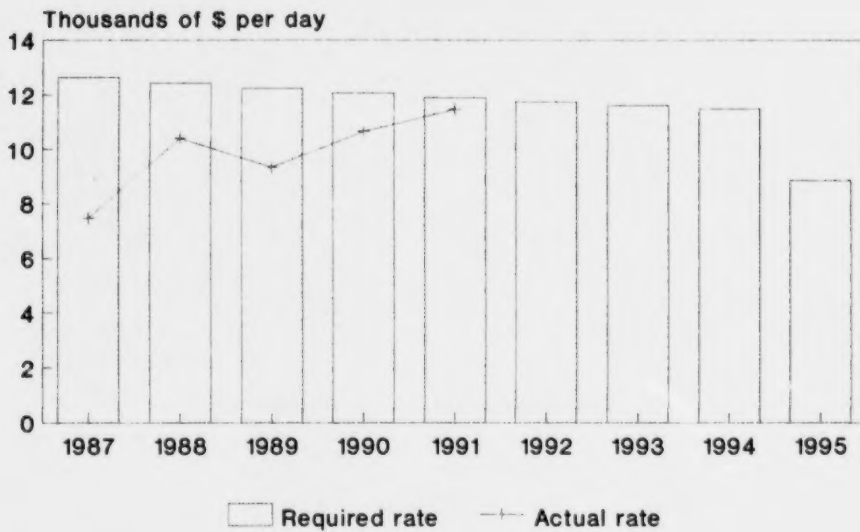
Required charter rate versus actual market rate for a 27,000 dwt bulk carrier,
built 1985. (UNCTAD V resolution terms)



57. In the case of tanker, applying the above cited criteria, under the OECD terms, the actual market rates would not cover the capital and operating costs as shown in graph 7. However, under the UNCTAD V resolution terms, in 1990 and 1991 market rates were sufficient to cover the capital and operating costs as shown in graph 8.

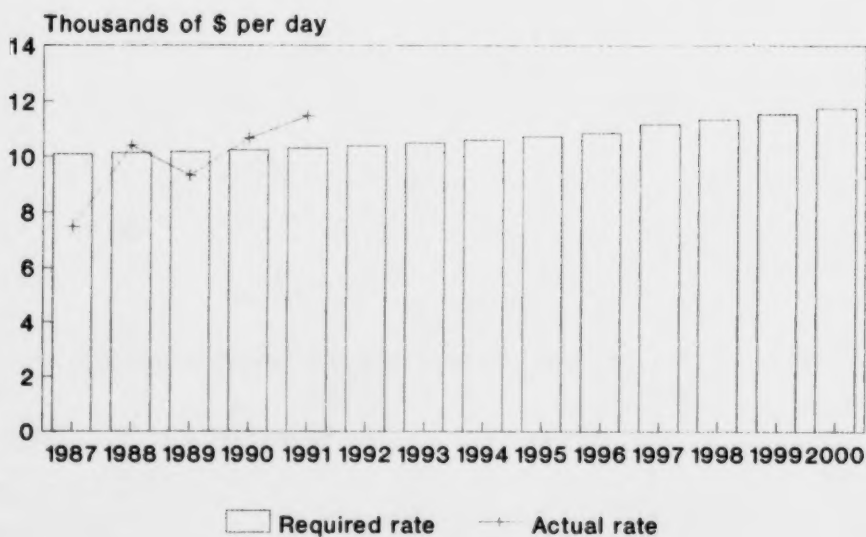
Graph 7

Required charter rates versus actual market rates for
a 80,000 dwt tanker, 1985 built. (OECD terms)



Graph 8

Required charter rates versus actual market rates for a 80,000 dwt tanker,
1985 built. (UNCTAD V resolution terms)



58. Table 12 shows the break-even charter rates in \$US per day under four alternative loan conditions for newbuilding, if they were to be ordered in 1990 and use for trading in 1992. The analysis is limited to certain standard ship types for which the information were readily available. Table 13 shows the break-even tramp trip charter rate in \$US per dwt per month required for a 15,000 dwt general cargo ship built in 1990 and used for trading in 1992 under similar alternative loan conditions.

59. The alternative loan conditions are the standard OECD terms and a variation if the interest charge were to be 5 per cent. The OECD terms at a lower interest rate of 5 per cent, when related to the UNCTAD V resolution terms, illustrates differences with respect to loan repayment duration. The third example shows a loan under UNCTAD V resolution terms with inclusion of a grace period of three years.

60. The inclusion of additional costs incurred by the shipowner towards down payment, if other commercial loans were availed to top up the equity amount or furnishing of bank guarantees, would only raise the break-even charter rates higher. Similarly, if a return on investment were to be considered, the break-even charter rates would have to be raised accordingly.

61. While the analysis considers seven different types of ship, it provides an indication of the required break-even freight rates. Such an analysis would be of little use, if no assessment of the future freight rates were to be made. As forecasting future freight rates would be difficult, an indication of trend would be useful. Graphs 9 to 11 show the linear trends based on the actual rates of the last ten year period. Among the three cases under consideration, the deviation from the trend line is relatively small in the case of the tanker market for a size range of 30,000 dwt. Large deviations were noted in case of a 27,000 dwt bulk carrier and 15,000 dwt general cargo ship. The freight rates rose dramatically between 1986 and 1988, while a moderate rise was noticed for the years 1990 and 1991. While the trend in all cases suggests an upward movement of rates in the future based on past rates, unless the rates are sufficiently above the current level it would be difficult for shipping enterprises to make a reasonable profit and support asset renewal.

Table 12

Comparison between break-even time charter rates
in \$US per day

Loan 1: 30,000 dwt Tanker, newbuilding 1990

Year	Rates on OECD terms	Rates on OECD duration with 5 per cent interest	Rates on UNCTAD V resolution terms	Rates on UNCTAD V terms with grace period
1992	17 571	15 524	13 481	7 909
1993	17 107	15 308	13 396	8 107
1994	16 653	15 102	13 321	8 314
1995	16 209	14 906	13 257	14 104
1996	15 776	14 722	13 203	14 051
1997	15 355	14 549	13 161	14 009
1998	14 946	14 387	13 131	13 978
1999	14 549	14 239	13 114	13 961
2000	10 087	10 025	13 109	13 957
2001			13 119	13 966
2002			13 331	14 190
2003			13 371	14 231
2004			13 428	14 287
2005			13 501	14 361
2006				14 452
2007				14 563
2008				14 693

Loan 4: 27,000 dwt Bulk Carrier, newbuilding 1990

Year	Rates on OECD terms	Rates on OECD duration with 5 per cent interest	Rates on UNCTAD V resolution terms	Rates on UNCTAD V terms with grace period
1992	13 713	12 246	10 782	6 789
1993	13 436	12 147	10 777	6 986
1994	13 170	12 058	10 782	7 194
1995	12 914	11 980	10 798	11 405
1996	12 668	11 913	10 824	11 432
1997	12 434	11 856	10 862	11 469
1998	12 213	11 812	10 912	11 519
1999	12 003	11 781	10 975	11 582
2000	8 884	8 840	11 050	11 658
2001			11 140	11 747
2002			11 405	12 021
2003			11 526	12 142
2004			11 664	12 280
2005			11 819	12 435
2006				12 608
2007				12 799
2008				13 011

Table 13

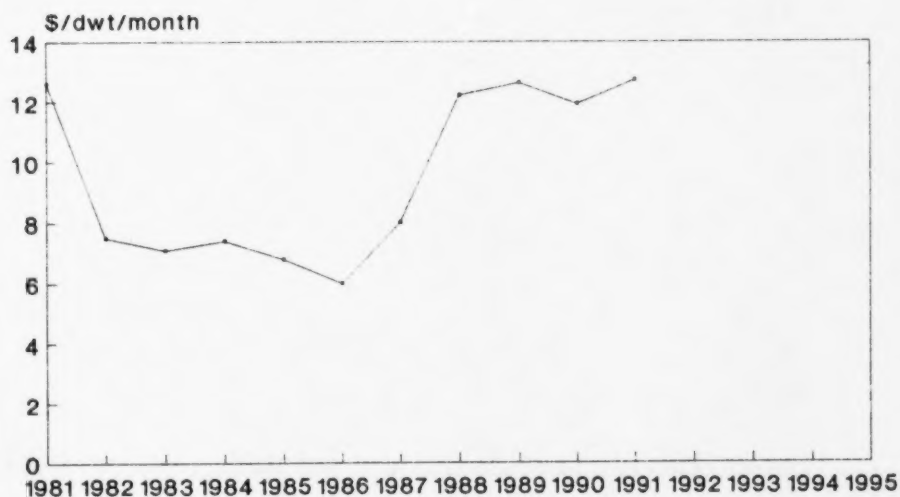
Comparison between break-even tramp trip charter rates
in SUS per dwt per month

15,000 dwt General cargo ship, newbuilding 1990

Year	Rates on OECD terms	Rates on OECD duration with 5 per cent interest	Rates on UNCTAD V resolution terms	Rates on UNCTAD V terms with grace period
1992	29.17	25.89	22.62	13.71
1993	28.48	25.60	22.54	14.08
1994	27.81	25.33	22.48	14.47
1995	27.16	25.07	22.43	23.79
1996	26.52	24.84	22.41	23.76
1997	25.91	24.62	22.40	23.76
1998	25.33	24.43	22.42	23.78
1999	24.76	24.27	22.47	23.82
2000	17.70	27.60	22.53	23.89
2001			22.62	23.98
2002			23.07	24.45
2003			23.22	24.60
2004			23.40	24.78
2005			23.62	24.99
2006				25.24
2007				25.52
2008				25.84

Graph 9

Trend in freight rates (trip charter) for a 15,000 dwt general cargo ship
in SUS per dwt per month



Graph 10

Trend in freight rates (time charter) for a 27,000 dwt bulk carrier
in \$US per day

Graph 11

Trend in freight rate (time charter) for a 30,000 dwt tanker
in \$US per day



B. Second-hand ships case studies

62. Based on the assumptions detailed in annex II, comparisons are made for the vessel being bought with commercial loans, or under UNCTAD V terms for second-hand ships, and the actual market rates for years 1990 and 1991. The cases considered are a 27,000 dwt bulk carrier, a 80,000 dwt tanker, and a 15,000 dwt general cargo ship - all five year-old ships. The results of the computation are presented in tables 14 to 16, and a direct evidence on the set of assumptions are, that the actual market rates do not provide the returns to cover capital and operating costs under the two loan conditions in all cases.

Table 14

Comparison of required break-even and actual market time charter rates
for a 27,000 dwt bulk carrier
in \$US per day

Year	Required break-even rates under a commercial loan	Required break-even rates under UNCTAD V resolution	Actual market rates yearly average
1990	9 405	7 965	7 400
1991	8 850	8 004	7 700
1992	8 983	8 053	
1993	8 787	8 112	
1994	8 600	8 180	
1995		8 260	
1996		8 350	
1997		8 452	
1998		8 567	
1999		8 695	

Table 15

Comparison of required break-even and actual market time charter rates
for a 80,000 dwt tanker
 in SUS per day

Year	Required break-even rates under a commercial loan	Required break-even rates under UNCTAD V resolution	Actual market rates yearly average
1990	22 409	17 956	10 667
1991	20 360	17 745	11 467
1992	20 421	17 546	
1993	19 446	17 359	
1994	18 483	17 186	
1995		17 026	
1996		16 881	
1997		16 750	
1998		16 636	
1999		16 539	

Table 16

Comparison of required break-even and actual market tramp trip charter rates
for a 15,000 dwt general cargo ship
 in SUS per dwt per month

Year	Required break-even rates under a commercial loan	Required break-even rates under UNCTAD V resolution	Actual market rates yearly average
1990	17.98	15.31	11.9
1991	16.98	15.40	12.7
1992	17.25	15.53	
1993	16.92	15.66	
1994	16.60	15.82	
1995		16.00	
1996		16.20	
1997		16.43	
1998		16.68	
1999		16.96	

Chapter IV

CONCLUSIONS

63. Extensive fleet replacement would have to be undertaken by developing countries over the next five-year period. Replacement with second-hand ships may not be feasible on a large scale. There would be a need for newbuilding tonnage for the fleet renewal programme of developing countries. The amount of finance required may not be easily available from the traditional sources of the past. Increased equity participation would be a prerequisite for the lending institutions.

64. The study has noted that a variety of loan terms and conditions are theoretically possible for purchase of a ship based on variations in down payment, the rate of interest, the repayment period, the grace period and the nature of resources securing the loan. From the borrower's point of view, favourable loan terms (low interest rate and long repayment period) result in a much lower level of debt service, especially in the early years. A careful quantification of the cash-flow discounting appraisal method, among the available different loans, is required to determine the most suitable condition. The choice of currency for the purchase of a ship would have an impact on the repayment capabilities.

65. Funds from international or regional development banks have not been a major source of ship financing in developing countries.

66. The current market charter rates are substantially below the required break-even rates when financing is obtained under the OECD terms. This is evidenced by the fact that certain types of ship, if they had been purchased at the lowest price in the past under the OECD terms, would not be able to cover the required break-even charter rates. As both capital cost and operating costs are expected to increase in the future, unless a substantial rise in freight rates occurs, developing countries' investments in newbuilding and second-hand ships are likely to incur substantial losses.

67. Leasing would be the most appropriate source of financing for developing countries, as no large cash out-lay is required. However, freight rates would also have to increase to allow the lessors to obtain a sufficient return on their investment. To facilitate leasing, suitable changes would have to be made to national legislation.

Notes

1. *Finance for ship purchase* (TD/B/C.4/139); *Merchant fleet development: Ship financing for developing countries* (TD/B/C.4/294); *Major issues in world shipping: (a) Merchant fleet development* (TD/B/C.4/301).
2. Dr. Martin Stopford, "Shipping Investment" in *Seatrade Business Review*, March/April 1989, p. 21.
3. World Bank, "India's growing conflict between trade and transport", 1990.
4. "A protracted credit squeeze", *Lloyd's Shipping Economist*, June 1984, p. 14.
5. "Banking crisis could destabilise shipping", *Lloyd's List*, 18 April 1988.
6. Bruce Vail, "What the bankers learned", *American Shipper*, February 1988, p. 59.
7. The World Bank, the African Development Bank, the Asian Development Bank, the Caribbean Development Bank, the Inter-American Development Bank, the Islamic Development Bank, and the Arab Fund for Economic and Social Development.
8. See UNCTAD report, *Ship financing for developing countries*, (TD/B/C.4/294).
9. "Mezzanine Capital: growing importance", *Lloyd's Shipping Economist*, October 1991, pp. 9-12.
10. V.D. Chowgule's statement to the ICC symposium on bareboat chartering, Bareboat Charter Registration, ICC, Paris, p. 32.
11. "Cost push", *Lloyd's Shipping Economist*, December 1991, p. 3.

Annex IPrices of newbuilding for selected types of ships
(in millions of \$US)

Year	Ship type						
	Tanker			Bulk carrier			General Cargo a/
	30,000 dwt	80,000 dwt	130,000 dwt	27,000 dwt	60,000 dwt	120,000 dwt	15,000 dwt
1981	25.0	38.0	51.0	19.0	27.5	42.0	14.0
1982	17.0	24.0	32.5	13.0	18.0	26.0	14.0
1983	16.0	23.0	31.5	12.0	17.0	25.0	13.2
1984	14.5	21.0	29.0	11.0	15.5	24.0	12.8
1985	13.0	18.5	25.0	10.0	14.0	20.5	12.8
1986	14.0	21.0	26.5	11.5	15.0	23.0	14.2
1987	20.0	29.0	34.0	14.0	20.5	30.0	15.0
1988	27.0	38.0	46.0	20.0	27.0	39.0	17.3
1989	31.0	43.0	54.0	22.5	30.0	45.0	28.6
1990	30.0	44.0	55.0	21.5	31.5	46.0	24.0
1991	30.5	44.5	55.5	22.0	32.0	50.0	24.1

Source: Fearnleys (Oslo), *Review*, 1990 and 1991.

Note: The prices are for cash payment and refer to estimate for contracting at year end. Japanese and Korean prices are used as basis.

a/ General cargo prices are for Japanese build as reported in *Lloyd's Shipping Economist*, various issues.

Second-hand values for selected types of ship, five year old,
(in millions of \$US)

Year	Ship type						
	Tanker			Bulk carrier			General Cargo a/
	30,000 dwt	80,000 dwt	130,000 dwt	27,000 dwt	60,000 dwt	120,000 dwt	15,000 dwt
1981	11.0	10.0	13.3	9.4	12.8	16.0	8.5
1982	11.0	6.0	9.0	6.2	6.3	7.8	6.1
1983	12.3	11.0	11.0	7.5	7.5	11.0	5.2
1984	8.3	9.0	9.0	6.0	8.8	13.5	4.5
1985	6.5	9.0	8.3	3.8	6.1	11.0	3.2
1986	11.0	13.0	13.8	4.0	7.8	12.0	3.3
1987	13.0	16.0	20.0	7.0	13.0	19.5	3.7
1988	16.0	22.0	28.0	11.0	17.0	27.5	5.2
1989	20.0	34.0	40.0	14.0	21.5	32.0	8.8
1990	21.5	34.0	37.0	11.0	18.5	28.0	10.2
1991	20.0	32.0	36.0	13.5	23.0	37.0	10.2

Source: Fearnleys (Oslo), *Review*, 1990 and 1991.

Note: The prices are for prompt delivery, charter free ships, good condition and cash payment, estimate for market values.

a/ General cargo prices as reported in *Lloyds Shipping Economist*, various issues.

Annex IIDetails of assumptions used to calculate break-even charter rates in examples

The examples were analysed using a commercial shipping software used of investment appraisal. The programme had the following facilities to enter data:

- cost details;
 - stage payments on newbuildings;
 - extra capital cost/subsidy items;
 - depreciation policy for profit and loss account purpose;
- financing details;
 - equal principal, annuity and variable repayment schedules;
 - bank guarantee;
 - varying interest rates;
 - moratoria on principal and interest;
 - balloon repayment on loan termination;
- employment details;
 - charter rates on daily, monthly or deadweight basis;
 - variable days on hire per year;
 - hire payable in either advance or in arrears;
 - hire variable from year to year or within a year;
- operating costs;
 - specified daily, monthly or annual basis;
 - provision for lump sum costs;
 - different rates of escalation for each cost item;
- residual value of vessel;
- different currencies with appropriate exchange rates can be specified for different cost items.

The programme calculated, cash-flows, rate of return, required charter rates, required residual value, variation matrices and a consolidated cash-flows for a fleet of ships.

A. OECD terms used are as follows:

- (i) Maximum loan = 80 per cent of the contract price;
- (ii) Fixed interest rate = 8 per cent per annum;
- (iii) Loan repayment period = 8.5 years.

B. UNCTAD V resolution terms (resolution 121 (V)):

- (i) Maximum loan = 90 per cent of the contract price;
- (ii) Fixed interest rate = 5 per cent per annum;
- (iii) Loan repayment period = 14 years for newbuilding, 10 years for second-hand ships;
- (iv) Grace period = three years.

C. Assumption for second-hand ships:

- (i) The ships were purchased in 1990;
- (ii) Interest rate based on 1990 average LIBOR plus spread of 2 percentage points;
- (iii) Ships are five years old
- (iv) Commercial loan available for 60 per cent of the value with repayment duration of five years.
- (v) Alternative loan condition based on UNCTAD V resolution, loan amount 90 per cent of the value with repayment over a ten year period at fixed interest rate of 5 per cent.

D. Other assumptions:

- (i) On hire days 355 for the first ten years and 350 days per year from the eleventh year onwards;
- (ii) Loan draw-down at the end of construction;
- (iii) Escalation of operating costs at a uniform rate of 5 per cent per annum;
- (iv) Commission of 2.5 per cent and not paid in advance;
- (v) Interest days = 360 per year;
- (vi) Residual value of the ship set to zero at the end of the loan period.



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REVIEW OF ACTIVITIES IN THE FIELD OF SHIPPING, PORTS
AND MULTIMODAL TRANSPORT

Note by the UNCTAD secretariat

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I. INTRODUCTION

1. At its eighth session, held in Cartagena in February 1992, the Conference decided to give a new direction to the work of UNCTAD, as reflected in the Cartagena Commitment. Following the new approach, it was decided to suspend the existing main Committees of the Trade and Development Board, including the Committee on Shipping. The work of the latter was to be incorporated in the newly-created Standing Committee on Developing Services Sectors: Fostering Competitive Services Sectors in Developing Countries. In implementation of the decisions taken at UNCTAD VIII, the Board, at the second part of its thirty-eighth session in April 1992, adopted the new terms of reference of the Standing Committees.

2. The suspended Committee on Shipping, at its fourteenth session in June 1990, called on the UNCTAD secretariat to undertake a number of studies dealing with priority problems and concerns of developing countries in the fields of shipping, ports and multimodal transport. In addition, it decided to establish expert groups in the areas of ports and multimodal transport to make proposals on the possible direction of work in these areas. Subsequently, the Secretary-General of UNCTAD decided to convene, in May 1992, a group of eminent persons to discuss possible future shipping policy directions in the light of the issues raised in the secretariat report entitled "Industry and policy developments in world shipping and their impact on developing countries" (TD/B/CN.4/5).

3. The present document briefly reviews the activities undertaken by the secretariat since June 1990 in response to the above-mentioned requests and summarizes the major recommendations made by the three Expert Groups referred to in paragraph 2.

II. REVIEW OF ACTIVITIES IN THE FIELDS OF SHIPPING, PORTS AND MULTIMODAL TRANSPORT

A. Activities in the field of shipping

4. In recent years the shipping industry has continued to be characterized by important technological and organizational changes. The continuing shift from conventional general cargo shipping to large-scale container operations and the consequent move by operators, particularly from traditional maritime nations, into multimodal and logistics services; coupled with an increasing tendency towards internal or external growth of companies, have had a considerable impact on shipowners from developing countries and their ability to participate in the provision of maritime transport services in a meaningful, commercially viable manner.

5. The suspended Committee on Shipping, at its fourteenth session adopted resolution 65 (XIV) in which it, inter alia, expressed concern over increasing structural problems facing the shipping industry as well as the need to assist developing countries in the process of adjustment of their maritime engagement to enable them to continue to adequately meet the transport requirements of the trading community. Consequently, it requested the UNCTAD secretariat "to analyse the on-going structural and technological developments in the maritime sector and to identify the scale and nature of the technology gap experienced

by developing countries. The report should take into account industry developments in all sectors of maritime transport as well as changes in the shipping policy framework based on various national legislations and multilateral agreements.

6. In response to this request, the secretariat has prepared a document entitled: "Industry and policy developments in world shipping and their impact on developing countries" (TD/B/CN.4/5). The document reviews recent developments of a technological and structural nature, particularly in liner shipping. It then makes a general assessment of international and national policies pursued in the past that have aimed at promoting the participation by developing countries in world shipping. Based on this first assessment, it can be concluded that these policies have only partly been able to bear concrete results. In particular, these policies were not always sufficiently responsive to the challenge posed by the process of structural adjustments in shipping and to the greatly varying stages of development of the maritime engagement of different developing countries and regions.

7. In the light of these developments, the starting point for the reconsideration of the maritime engagement of developing countries should be the quest for shipping services adequate to their foreign trade requirements. In parallel to this basic consideration, each country will have to take its own policy decision on the desirability and on the economic merit of developing a national merchant marine. This decision will not necessarily be one in favour of a national fleet, but can equally be a rational one against merchant fleet development based on the quality of services imported and the merits of investment alternatives. For those countries that opt for an active engagement in shipping it will be necessary to reconsider actions and approaches taken to translate the principle of increasing participation by developing countries into economic realities, bearing in mind, however, the general changes in the policy framework governing the provision of shipping services. This entails, in principle, the liberalization of trade in shipping services and the determination of the potential for participation by developing countries in the provision of shipping services.

8. The change in policy direction towards liberalization and removal of market access restrictions has to be seen as a tool providing for the beneficial development of commercially viable shipping services and shipping companies. The attainment of a truly liberalized market environment benefiting both providers and users of maritime transport services will have to be subjected to a phased approach including a transition period which will give developing countries sufficient time to undertake the necessary structural adjustments in their shipping engagement. It is important that the notion of transition should not be understood as involving a time frame only, but above all as a concept of cooperation with the active participation of developed countries, geared to achieve necessary restructuring as quickly and smoothly as possible.

9. Given the importance of such policy changes for the maritime engagement of developing countries, the Secretary-General of UNCTAD decided to convene in May 1992 a Group of experts and eminent persons of the shipping industry, governments and academics to discuss issues raised in the report (TD/B/CN.4/5) and recommendations contained therein.

10. The very positive response of the Group to the document and the recommendations for further action contained in the "Report of the Expert Group on Shipping Policy" (TD/B/CN.4/6) raises hopes that the dialogue thus initiated, in particular with the shipping industry, can be further intensified. Such a dialogue could gradually develop into an "Industry Forum" with open attendance, where operators, government representatives, academics and other interested parties could enter into a dialogue on issues of concern to the development of competitive shipping industries in developing countries.

11. Based on the Cartagena Commitment, the Trade and Development Board at the second part of its thirty-eighth session adopted the terms of reference of the Standing Committee on Developing Services Sectors: Fostering Competitive Services Sectors in Developing Countries. In the field of shipping it was decided that the Committee should, inter alia, focus on:

- reviewing shipping policies in order to identify elements leading to the development of competitive shipping service sectors in developing countries;
- reviewing technological developments that affect maritime transport;
- consideration of conditions facilitating intra and inter-regional cooperation.

12. Bearing in mind the directions indicated by the terms of reference, document TD/B/CN.4/5 can be considered to provide for a basis of an in-depth policy analysis of developing countries bearing in mind the generally prevailing tendency for progressive liberalization as well as the subsequent policy changes already observed in a number of countries.

13. Some specific elements supporting new policy approaches are reflected in the terms of reference and addressed in studies carried out by the secretariat and produced as background documents. Special mention may be made on an analysis of "The role of transport in trade between developing countries" (UNCTAD/SHIP/640) and "Ship finance for developing countries" (UNCTAD/SHIP/642).

14. Document TD/B/CN.4/5 analyses the potential contribution of maritime transport to a closer integration of developing countries through improved trade links. Further work on economic cooperation among developing countries (ECDC) in the field of shipping has been carried out on a continuous basis, particularly with regard to the review of the implementation of recommendations by the expert group on ECDC that had been convened in 1989.

15. Furthermore, some basic considerations concerning possible future directions of work in ECDC in the field of shipping are contained in TD/B/CN.4/5.

16. The possibilities of actually achieving the necessary structural adjustment of the fleets of developing countries as outlined above will depend inter alia on the availability of credit finance to operators from developing countries. While the point is made in document TD/B/CN.4/5 that vessel ownership is not a crucial element to maintain a maritime presence by

developing countries, the expert Group of the Secretary-General in its report (TD/B/CN.4/6) draws attention to the need for a minimum ownership position to maintain market credibility. Consequently, document UNCTAD/SHIP/642 analyses currently prevailing financing conditions available to shipowners from developing countries and assesses their commercial viability in the light of the prevailing market situation and potential revenue earning capacities of ships thus financed.

B. Activities in the field of ports

17. An Ad Hoc Intergovernmental Group of Port Experts on the Development, Improvement and Operation of Ports was convened from 24 to 28 September 1990, in response to resolution 61 (XIII), section IV of the suspended Committee on Shipping. The Group reviewed and commented on the five studies prepared by the secretariat in the following fields:

- Cooperation among ports in developing countries (TD/B/C.4/AC.7/8);
- Maintenance of port equipment (TD/B/C.4/AC.7/9);
- Establishment of transshipment facilities (TD/B/C.4/AC.7/10);
- Guidelines for port managers on the use of computers (TD/B/C.4/AC.7/11);
- Port administration and organization: a noteworthy experiment in Morocco (UNCTAD/SHIP/627).

The Group also reviewed the port management training and the technical cooperation activities carried out by the secretariat. After having examined other issues, the Group adopted a set of recommendations addressed to the Committee on Shipping. These recommendations are dealing with the general aspects of port development, improvements and operations. They also concern the specific technical assistance and training activities of the UNCTAD secretariat in the field of ports as well as on its future study programme. The report on this meeting (TD/B/C.4/337 - TD/B/C.4/AC.7/12) contains the various recommendations made by the Group. It is suggested that they be endorsed by the Standing Committee on Developing Services Sectors in Developing Countries.

18. The activities carried out in the ports field by the secretariat during this period were initiated to implement the recommendations of the Ad Hoc Intergovernmental Group of Port Experts. Of the five recommended priority studies, two were finalized in 1991:

"The Principles of Modern Port Management and Organization"
(TD/B/C.4/AC.7/13)

This study considers the organization of a national port system by successively examining the possible aims, tasks, functions and structures of national and local port organization. The second part deals with management. An analysis is made of port management objectives and categories of decisions. A presentation is made of the administrative, economic, financial,

commercial, technical and human resources development tools that are available to port managers. The study concludes with a presentation of a method to examine and diagnose the management of a port.

"Port Marketing and the Challenge of Third Generation Ports"
(TD/B/C.4/AC.7/14)

This study starts with a presentation of the present foreign trade and international transport characteristics. The present situation gives ports real opportunities but also entails certain risks. The opportunities come from the fact that the organization of trade needs logistical platforms and the port is a privileged place that can be transformed into a centre of services and distribution. However, risks have grown as the competition between ports and for goods transported has increased. To meet these challenges, ports must be active, and managed and developed in a commercial way, and they have to be as close as possible to the ports users. Recommendations are made on how to organize and develop the marketing functions of a port so that the total port area can become the logistical platform that is needed for foreign trade.

19. The three other studies are well advanced but not completely finalized at the time of preparing this report (July 1992). They can be presented as follows:

"The Legal and Regulatory Aspects of Port Management"

This study covers the whole spectrum of port legislation, including the organization of ports at the national level, the legal aspects of developing and financing port works, the administrative port police, the regulations for port operations, liabilities and insurance, and the legal aspects of land policy and management. An informal meeting of port lawyers was organized in November 1991 to discuss the first draft of this study and make recommendations for its improvement. Twenty-three experts from 14 countries attended this meeting. The study is in its final stage.

"Human Resources Development in the Ports Field" and "Strategic Planning for Port Authorities"

These two studies are well advanced but they have not reached their final stage. It is envisaged to supplement them with case studies to illustrate the various concepts so that their implementation by port managers of the techniques and procedures presented will be facilitated.

20. The UNCTAD Ports Newsletter is being produced twice a year, as recommended by the Intergovernmental Group, in April and in November. It presents, as requested, information on UNCTAD's activities in the ports field (studies, technical cooperation and training). In addition, the Newsletter presents technical information on topics of interest to ports in developing countries. For instance, a technical paper on port privatization was issued. The Newsletter is distributed free of charge to an informal network of more than 200 focal points located in more than 100 countries. In addition, voluntary financial contributions are accepted. The funds collected are used to improve the quality of the Ports Newsletter and facilitate its dissemination.

21. The Intergovernmental Group recommended the extension of the UNCTAD/IAPH scheme to produce monographs on port management. In 1991, two monographs were produced and distributed on the following themes:

"Economic Approach to Equipment Selection and Replacement" (UNCTAD/SHIP/494(8)) and "Recommendations on the Planning and Management of Multipurpose Terminals" (UNCTAD/SHIP/494(9))

In 1992, two other monographs are under preparation on the subjects of port information and computerization and on the trade logistic platform in the port area.

22. During the Intergovernmental Group of Port Experts of September 1990, several representatives of developing countries emphasized how important it was for them that the UNCTAD secretariat should be a research and reference centre in the field of ports since very often they do not have the means to establish such centres. It is therefore essential that the future studies to be carried out by the secretariat correspond exactly to what is currently needed by the port industry. The Group also recommended that similar meetings of port experts be reconvened periodically and be preceded, if possible, by a high-level seminar for senior port officials. It is therefore suggested that a forum on the ports industry be organized by the secretariat in 1993 with the following terms of reference:

- Two-day policy seminar for senior port officials on port commercialization, marketing and information systems.
- The industry forum will:

Review the last five studies produced by the secretariat and the monographs produced in cooperation with IAPH;

Examine the latest developments taking place in the ports and related sectors and, in the light of this review and of the Board resolutions concerning the ports sector, recommend other priority studies to be carried out by the secretariat;

Review and monitor the work carried out by the secretariat in the field of port management training and technical cooperation and make suggestions for future activities;

Prepare a report for submission to the Committee on Services at its next session.

C. Activities in the field of multimodal transport

23. Since the fourteenth session of the suspended Committee on Shipping, the work undertaken by the secretariat in the short term concentrated on:

- (a) completion of outstanding requests from the Committee,
- (b) preparation of the requested studies for the Group of Experts on Multimodal Transport, and

(c) a study on the effects on developing countries of the establishment of very large multimodal transport operations.

1. Completion of outstanding requests

24. The only outstanding request was one for a report on container ship leasing (TD/B/C.4/339) which comprehensively dealt with the problems surrounding the leasing of container ships. It analyses briefly the question of ship financing, goes on to treat the advantages and disadvantages of ship leasing from both the lessor and the lessee's view and concludes:

"A comparison of the various advantages and disadvantages shows that ship leasing cannot serve as a general solution to all problems concerning ship financing. However, it is one possible way of meeting the financial requirements for the acquisition of vessels. Tax benefits and flag advantages can be combined with the financial needs of shipping companies by leasing a vessel instead of buying it ..."

2. Preparation of requested studies for the Group of Experts

25. The studies referred to under (b) above may be summarized as follows:

Block train services in multimodal transport (TD/B/C.4/AC.11/2)

The study recommends that countries wishing to promote their transport corridors should seriously consider the advantages inherent in the operation of block train services including the consideration of the operation of privatized block train services.

Introduction of container block trains may have considerable influence on the competition between ports in a region. Since containers may be brought to a given inland point by different routes, the port having the most efficient liaison with the hinterland is likely to be chosen as interface port.

Container block trains represent an important element in multimodal ocean-landbridge service. Examples cited in the study show that efficient, fast, reliable transcontinental landbridge service providing guaranteed transit times, coordinated with ocean carriers' schedules, is attractive to clients and will increase revenue-earning movements.

The economic advantages of double-stack container trains are obvious. Increased container capacity and the correspondingly reduced tare weight and capital costs of the equipment per payload together with modern operational methods, ensuring a higher fuel efficiency, lower labour requirements and other operational savings make the double-stack container train an attractive innovation.

Problems and requirements that arise from broad economic reforms and restructuring of selected countries (TD/B/C.4/AC.11/3)

This study analyses some of the problems associated with the process of transition to a market economy in the countries of Central and Eastern Europe. It finds that without efficiently functioning transport systems, the prospects for further economic development are very limited. Transport and distribution sectors will play a key role in the transition to a market economy. There is an extensive need in this field for revitalization, new construction and introduction of modern equipment and operating methods. In some areas, significant investments are needed.

In this transitional process in the transport sector, the study finds that emphasis should be placed on infrastructure improvement and support to create conditions of competition within the framework of the transport market. Reorientation towards the open market system should be based on the adoption of corresponding legislation, permitting freedom for economic activities, equal economic conditions for different forms of property and the possibility of privatization of State enterprises.

For a radical improvement of performance of transport systems the study finds that, the rehabilitation and further development of the transport infrastructure is necessary. Attention should be given, at first, to eliminating bottlenecks, especially at rail and road frontier crossings, and filling in gaps in the domestic transport networks. Development of transport infrastructure is characterized by high capital intensiveness and, in general, low financial return. In this field, reliance on foreign investments is considered to be essential, but the study finds that foreign investors have up to now taken a very cautious approach in the countries of the region, choosing the less capital-intensive sectors, particularly the forwarding sector, as major financial investments are considered far too risky for the moment.

Practical problems faced by Governments and commercial parties involved in multimodal transport operations to and from developing countries (TD/B/C.4/AC.11/4)

This study identified three major types of constraints to the development of multimodal transport resulting from internal conditions within many developing countries. The first is the physical limitation of infrastructure, equipment and technology which render difficult the movement of goods. The second is an inadequate institutional and legal transport environment which does not encourage potential transport operators to accept responsibility for multimodal transport operations and the third refers to operational and commercial conditions which do not favour the development of a local market for multimodal transport services. The study identifies three fundamental areas in which developing countries might need assistance and support in the development of multimodal transport services:

- (i) Creation of awareness on multimodal transport issues among commercial parties and Governments in developing countries;

- (ii) Provision of practical and up-to-date information to local decision-makers on the appropriate measures to be taken and their corresponding implications; and
- (iii) Access to regular information on current trends in multimodal transport and technological developments related to international trade and transport.

The effects of EDP and EDI on transport organizations and users
(TD/B/C.4/AC.11/5)

This note draws on a number of recent papers dealing with the subject including a study prepared for ESCAP and two papers prepared for the International Data Exchange Association. The note draws a number of conclusions:

- (i) If developing countries' transport providers are to thrive, they must take full advantage of both EDP and EDI, which means investing in the appropriate amount of equipment;
- (ii) Developing countries' transport companies must provide adequate EDP training to all staff using EDP equipment;
- (iii) Local training institutions should provide EDP courses particularly geared towards the transport industry through part-time or evening classes; and
- (iv) A large number of "off-the-shelf" software packages for the transport industry exists. However, selection of the "right" software for transport providers and users must receive careful attention since the choice of inappropriate software may have serious economic consequences.

Developments in the field of container standards (TD/B/C.4/AC.11/6)

This report highlights the importance of consistency in the ISO policy on container standards. It states inter alia that: "experience has shown that the introduction of larger containers, as a rule, requires massive additional investments in rolling stock and infrastructure. This has an impact on the cost of operation and, in the end, usually leads to higher freight rates. Thus, the final effect of the introduction of larger containers may be quite the opposite to the objective desired".

The monitoring of developments in the field of standardization of containers has enabled the UNCTAD secretariat to draw the attention of ISO to the needs and requirements of developing countries in this area. At the same time, this activity has led the transport industry to recognize the need to have stable internationally-recognized and voluntary-accepted container standards. Based on information set out in reports prepared by the UNCTAD secretariat, the Committee on Shipping in various resolutions has drawn the attention of ISO to the negative technical and commercial consequences, for developing countries, in particular, of continuing increases in dimensions and maximum gross mass of containers.

26. A Group of Experts on Multimodal Transport met from 9 to 13 March 1992, i.e. immediately after the session of UNCTAD VIII. It comprised, among its members and among the many observers who participated very actively in the discussions, a very good balance between private and public sector representatives. The Group reviewed the documentation prepared for it and elaborated a new draft programme of work "on the assumption that it should reflect the dynamic nature of the industry, the emerging trends and the major policy issues in this field".

27. The Group felt that its draft reflected a new spirit of partnership in the economic relations between countries, and the intention to narrow the gap between the developed and other countries in this specific field, in particular in relation to the establishment of integrated logistic services, electronic data interchange and the question of larger-than-current ISO standard containers. The Group was convinced that multimodal transport and containerization are fundamental ingredients for the expansion of trade, which in itself is a key element in the fostering of sustainable development and the elimination of poverty. The Group emphasized the need for the programme of work to be implemented in a dynamic and progressive sequence supported by the necessary policy analysis, conceptual innovation, research, and inputs from both governmental and non-governmental experts and actors.

28. The Group felt that the quality of outputs of the programme of work must be constantly evaluated so as to enable the secretariat clearly to identify the determinants of success. It recommended that the Standing Committee on Services establish a list of priorities which will permit the secretariat to develop appropriate implementing strategies and timetables. It also felt that in order to encourage better cooperation in the national trade and transport fields, the public and private sectors should be encouraged jointly with the government to establish national working groups which could discuss and thus understand the complex issues of the multimodal transport environment and recommend policy and operational measures to governments and other concerned parties for consideration.

29. The Group's draft future programme of work in the fields of multimodal transport, containerization and technological developments is contained in annex I to TD/B/C.4/342. It is recommended to the Committee for adoption.

30. The secretariat is currently undertaking a study on the effects of very large multimodal transport operations on developing countries. It is dealing particularly with the impact of the development of mega multimodal transport operators on both users and providers of transport services in developing countries.

D. Activities in the field of maritime and transport legislation

31. The following includes a review of activities in the field of maritime legislation.

32. In the area of ship financing it has been recognized within UNCTAD that the lack of finance for ship acquisition has been and remains a major difficulty for developing countries in expanding their national merchant fleets. The activities of UNCTAD in aiming at the alleviation of this problem

include, inter alia, the elaboration of a draft convention on maritime liens and mortgages by the Joint UNCTAD/IMO Intergovernmental Group of Experts on Maritime Liens and Mortgages and Related Subjects. The objectives of the draft Convention are (a) to provide a generally acceptable legal framework governing the recognition and enforcement of maritime liens and mortgages and thus to achieve international uniformity, (b) to strengthen the international position of the mortgagees and financiers of ship building and ship purchase and thereby to improve conditions for ship financing at the international level.

33. Further to General Assembly resolution 46/213, a United Nations/International Maritime Organization Conference of Plenipotentiaries has been scheduled to be held in the Spring of 1993, for consideration and adoption of the draft convention on maritime liens and mortgages.

34. As to the subject of arrest, which is a means of enforcing maritime liens and mortgages, the Joint UNCTAD/IMO Intergovernmental Group agreed that it might be necessary to amend the International Convention Relating to the Arrest of Seagoing Ships of 1952, in the light of the decisions taken by a diplomatic conference in respect of the draft maritime liens and mortgages convention. In view of the close relationship between the Arrest Convention and a future convention on maritime liens and mortgages, the Joint Group recommended that, with regard to arrest, consideration of any further work be postponed until after the adoption of the final text of the convention on maritime liens and mortgages by a diplomatic conference. It also recommended that the relevant bodies of UNCTAD and IMO consider making provisions for further meetings of the Joint Group, in the light of the results of the diplomatic conference (TD/B/C.4/AC.8/27). The recommendations of the Joint Group have been endorsed by the Committee on Shipping at its fourteenth session in resolution 66 (XIV), which was in turn endorsed by the Trade and Development Board at the first part of its thirty-seventh session.

35. Ship leasing being an alternative means of ship financing may also be a subject of investigation. This method of ship financing is of particular interest to developing countries, since it alleviates the need for capital outlay. This is especially so when a shipping company is interested in the sole use of a vessel without any particular need to become the registered owner. Compared with conventional bank financing, ship leasing offers more flexible terms and some additional advantages to lessors and/or lessees, such as the possibility of financing the payment of lease hire from the earnings of the vessel during its operation, tax relief and access to a particular flag (see TD/B/C.4/339).

36. General average was the subject of a preliminary analysis in the secretariat report "General Average - A preliminary review" (TD/B/C.4/ISL/58), which was considered at the thirteenth session of the Working Group on International Shipping Legislation (WGISL) where the Group decided, inter alia, to request the UNCTAD secretariat to approach, in close consultation with the Comité Maritime International (CMI), the insurance industry, including the International Union of Marine Insurance (IUMI), and international organizations representing commercial parties involved with general average, to study the extent to which insurance arrangements could simplify the operation of the general average system.

37. Following this decision by the Working Group, the secretariat has contacted, in consultation with CMI, the relevant international and commercial organizations involved in general average, requesting their views and proposals and any other information on the subject. Further to the request of the Working Group, a note was sent to Governments of developing countries requesting information on their experiences and those of commercial interests involved with the subject, including relevant information. Further consultations are to be held with interested parties as to the ways and means of simplification of general average procedure. The outcome will be reported to the Committee to enable it to take the appropriate decision.

38. The WGISL at its twelfth session considered the subject of charter parties, having before it a report prepared by the secretariat entitled "Charter parties - a comparative analysis" (TD/B/C.4/ISL/55). It could not, however, reach agreement on future work on the subject. Three draft resolutions, submitted by the Group of 77, Group B and in the Chairman's compromise text, were annexed to the report of the Working Group (TD/B/C.4/ISL/56), leaving the matter to be decided by the Committee on Shipping at its fifteenth session.

39. Developing countries considered the subject of charter parties to be of particular importance, since they are increasingly entering the bulk trade. It was therefore considered essential that developing countries base their chartering trade upon a firm and rational foundation initiated and adopted taking account of developing countries' interest (TD/B/C.4/ISL/56). The Committee is invited to take a decision concerning future work on charter parties.

40. The entry into force of the United Nations Convention on the Carriage of Goods by Sea, 1978 (Hamburg Rules) in November 1992 will mean application of a new set of rules to such contracts covering the trades to which the Rules apply. It is, however, likely that the existing international Conventions, namely the International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading, 1924 (Hague Rules) and the Hague Rules as amended by the Protocol of 1968 (Hague-Visby Rules) will still remain in force for some years. The Committee may wish to invite member States to give consideration to becoming parties to the Hamburg Rules so as to avoid uncertainties arising from the application of three different regimes to bills of lading. It may also request the secretariat to monitor the situation and to report to the Committee, and to provide assistance to developing countries in the implementation of the Hamburg Rules.

41. The secretariat has been receiving an increasing number of requests from developing countries for technical assistance in the development or modernization of their national legislations. Such requests have been dealt with on an individual basis. It is, however, considered that the formulation of a model code, which could be used as a guideline by developing countries in elaborating their own national legislations, would be of particular advantage. It would (i) provide a common basis for fostering international uniformity in the development of national legislations in developing countries and (ii) eliminate duplication of effort in individual projects and facilitate modernization of national legislations in such countries.

42. A further issue which requires the attention of the Committee is the Maritime Advisory Exchange (MAE). It may be recalled that the MAE had been established upon the initiative of UNCTAD by the private sector organizations, namely the Baltic and International Maritime Council, the International Chamber of Commerce and Lloyd's of London Press Ltd. It was to provide a focal point through which information relating to combating maritime fraud could be obtained. It started operation on 1 December 1988 in London.

43. It was, however, considered by the Board of Trustees that the full-scale promotion and functioning of the MAE required financial assistance. Thus the Committee at its fourteenth session, by resolution 65 (XIV), section VII, invited "member Governments and private enterprises, in a position to do so, to provide financial assistance to the Maritime Advisory Exchange in order to ensure its continued functioning". This was brought to the attention of the member States by the secretariat in the Secretary-General's note dated 24 January 1991, but no favourable response was received. In the light of the above the Standing Committee may wish to recommend to the Board of Trustees to reconsider the operation of the MAE.

E. Technical cooperation and training

44. Technical cooperation activities are carried out in all the fields mentioned earlier. They are grouped together in this section for convenience of presentation.

1. Volume of the programme

45. The volume of UNCTAD's technical cooperation and training activities in shipping, ports and multimodal transport, increased steadily throughout the 1980s, reaching a peak in 1989 and 1990. The following table shows its evolution over the past seven years.

EVOLUTION OF THE UNCTAD TECHNICAL COOPERATION AND TRAINING
PROGRAMME 1985-1991

(project expenditure in thousands of US dollars)

Year	UNCTAD total	Shipping ports and multimodal transport	Percentage of total represented by shipping, ports and multimodal transport
1985	7 158	1 771	24.7
1986	10 935	2 440	22.3
1987	11 799	3 548	30.1
1988	12 187	3 246	26.7
1989	18 356	3 612	19.7
1990	21 996	3 668	16.7
1991	20 431	3 037	14.9

46. In July 1992 a total of 39 projects were being executed by the Shipping Division consisting of:

7 interregional projects

14 regional projects (8 in Africa, 1 in Asia and 5 in Latin America)

18 national projects (10 in Africa, 3 in Asia, 4 in Latin America and 1 in Arab States)

2. Main features of the programme

(a) Human resources development and training

47. This has continued to be a principal feature of the Shipping Division's activities, the main element being UNCTAD's TRAINMAR programme. This programme is complemented by the organization of policy seminars and workshops for senior government officials and on-the-job training.

(i) TRAINMAR

48. This is a programme for promoting training and human resource development for officials and managers responsible for maritime transport. Most of the training is conducted by institutes in the participating countries and the role of UNCTAD is to encourage cooperation among institutes, effective performance and orderly development.

49. National or local training centres have been helped by the programme to resolve national problems through training. Organizational, technical and pedagogic support from UNCTAD enables them to continue to do this and to expand their activity. Some 80 versions of TRAINMAR courses exchanged between centres are in use for training some 6,000 officials or managers per year; in addition to which other courses of a local specificity run by these centres reach many more trainees.

50. TRAINMAR has continued to expand and develop over the past two years, and institutions in more than 50 countries now cooperate within the programme to enable management training to be conducted for the maritime sector and related enterprises. In 1990 the secretariat initiated an action plan to consolidate the cooperation arrangements. This covered seven principal courses of action:

- A development strategy for the programme
- Organization of the network for cooperation
- Reinforcement of individual centres
- Course development
- Structuring support through UNCTAD
- Inter-agency cooperation
- Ensuring funding of support activities

51. An advisory committee met in February 1992 to examine progress. The action plan has received support from UNDP and should be completed by mid-1993, at which stage a report will be prepared for the Committee.

52. Principal developments are that:

- A membership scheme has been introduced so that participating institutes can cooperate on a confident and equitable basis.
- There is now effective regional or subregional cooperation through seven regional networks; each network has established its own secretariat and financial arrangements, holds annual meetings and prepares cooperative work programmes.
- A small number of members designated as Resource Centres maintain contact with UNCTAD and ensure that latest developments are channelled to all members without excessive load upon UNCTAD.
- The system of cooperation facilitates exchange of course materials, trainers and trainees, sharing of information and experience, and the conduct of joint activities; it enables new members to obtain help for initiating TRAINMAR activities, providing that they can cover the modest costs.
- Well-tried pedagogic methods have been documented for use by centres and a local ability to use them established; these are currently being updated. This approach ensures that professional standards are maintained and facilitates cooperation among centres.
- The UNCTAD secretariat is able to provide the organizational and technical support required from its regular budget, but the ability to provide an essential minimum of pedagogic guidance and control currently depends on extrabudgetary funds.
- Cooperation with other international organizations has been pursued productively; there has been particularly close cooperation with ICAO, which has established a sister programme, TRAINAIR.
- Extrabudgetary funding of about \$1 million a year is provided by donors to enable interregional and regional support to be provided for developing cooperation and for national activities where countries have wished to establish a particularly sound basis for training and human resource development.
- Some progress has been made in widening the coverage of training given by members to those enterprises which are small and cannot support their own training centres. This is being enhanced by the development of diploma courses and other career related training, in collaboration with local institutes of higher education and experienced centres in industrialized countries, and integration of all training programmes with policies for human resource development for management of the international transport industry.

(ii) Policy seminars

53. Some 40 policy seminars in shipping, ports and multimodal transport were conducted by the Shipping Division in English, French and Spanish during the last two years. These were:

- Multimodal Transport Workshops developed under the TRAINMAR Programme
- Seminars on Container Terminal Development Policy and Equipment Maintenance developed under the Improving Port Performance (IPP) Programme (a new IPP course on Strategic Port Pricing is currently being finalized)
- Container Management Seminars developed jointly with Antwerp Port Engineering & Consulting (APEC). A new seminar on the commercial role of ports is under preparation with finance from the Belgian Government. A first delivery is planned in 1993 in the Port of Ghent
- The strategic planning course for senior shipping managers (STRATSHIP) has been introduced to the TRAINMAR network. A key development strategy originally envisaged was to train a cadre of regional instructors from participants who had previously attended STRATSHIP workshops.

54. Many of the policy seminars are conducted at TRAINMAR centres with the participation of selected local instructors. In this way the TRAINMAR programme also provides an effective channel through which policy issues can be ventilated.

(iii) JOBMAR

55. The Shipping Division, in collaboration with the Centre for Maritime Cooperation initiated an on-the-job training programme in 1989 named JOBMAR. Its objective is to transfer up-to-date management techniques to middle/senior managers in developing countries by providing them with the opportunity of working alongside counterparts in countries with a more advanced maritime transport sector. Experience is gained by being able to see how problems are dealt with under normal commercial pressure. By the end of 1991 some 30 candidates had been placed, mostly with port authorities, shipping companies, industrial enterprises with in-house transport divisions and ship brokers. Assignments varied in length from one to three months.

(b) Advance Cargo Information System (ACIS)

56. One of the most important technical assistance projects carried out by the Shipping Division over the last four years has been the execution of a series of projects dealing with measures to increase the physical capacity of transport networks and transport operators through the introduction of modern data management techniques which permit much closer monitoring of cargo movements.

57. The central feature is the development and implementation of an Advance Cargo Information System (ACIS) which makes available to all transport operators information on cargo before such cargo reaches the interface between two transport modes.

58. ACIS is designed to cover all transport modes - ports, rail, road and rivers/lakes. By mid-1992 the following could be considered as a status report of the ACIS programme in Africa:

- PortTracker: The port manifest sub-module is now being used at four African ports; the Port Harbour Master sub-module is operational in two ports and under prototype demonstration in two; and the Port Gate Pass sub-module is under design and will be prototype tested in an additional port by the close of 1992.

- RailTracker: The RailTracker sub-module is operational in two versions. On four networks, goods and rolling stock are being tracked; on five networks, only rolling stock is being tracked.

In addition RailTracker is being installed on two networks. Seven networks have asked for the system but this can only be done if and when resources are available.

- RoadTracker: The road vehicle data base is under design.

(c) Contribution to the United Nations Transport and Communications Decades in Africa and Asia

(i) Africa

59. Since 1988 UNCTAD has participated actively in the preparations for the Second United Nations Transport and Communications Decade in Africa (1991-2000) and, in fact, chairs the Sub-Sectoral Working Group dealing with Shipping, Ports, Inland Waterways and Multimodal Transport. Strategies for achieving the Decade's objectives have been developed by this Working Group and these will be disseminated to member States through the production of a brochure and through presentations at national and subregional meetings, workshops, conferences, etc. Performance indicators are being defined in order to be able to monitor and evaluate progress in meeting the Decade's objectives.

60. Discussions are taking place with a number of African Governments and subregional organizations to develop project proposals for execution during the Decade.

(ii) Asia

61. Since 1990 when a mid-term review of the Transport and Communications Decade for Asia and the Pacific took place, UNCTAD has contributed to the development of a Regional Action Plan for the second part of this Decade.

Project proposals (some to be executed jointly with ESCAP) have been submitted in the fields of shipping and related services, multimodal transport, railway wagon information and control systems and human resource development. These projects are expected to get under way in 1993.

(d) Regional and national projects

62. Regional projects being undertaken include:

- harmonization of maritime legislation of West and Central African States;
- a feasibility study for a West African Coastal Shipping Service;
- assisting African land-locked countries in the formulation of shipping policies;
- creation of a shipping information system for a group of East African States;
- harmonizing port tariff structures in West Africa;
- assistance in the introduction of multimodal transport.

63. National projects include:

- assistance in the preparation of a comprehensive maritime code;
- development of a maritime information system;
- market research study for the development of a maritime centre;
- improving the organizational structures of a national shipping company;
- improving port administrations;
- feasibility study for a freeport;
- upgrading freight forwarding activities and introducing multimodal transport.

(e) Financing of technical cooperation and training activities

64. UNCTAD wishes to place on record its appreciation to the United Nations Development Programme, the European Economic Community and the Governments of Belgium, France, Germany, the Netherlands, Norway and Sweden which participate in funding the above activities.
